

MINC, Stefan; BRZOSTOWSKA, Maria

Influence of polarization capacity of cations of cesium, magnesium, calcium, strontium, and lanthanum on their specific adsorption in the inner part of the electric double layer. Roczniki chemii 34 no.3/4: 1109-1117 '60. (EBAI 10:3)

1. Katedra Elektrochemii Uniwersytetu, Warszawa.

(Polarization)	(Cesium)	(Magnesium)	(Calcium)
(Strontium)	(Lanthanum)	(Adsorption)	(Cations)

MINC, S.

✓ The influence of cations on the differential capacity of the dropping mercury electrode in solutions of electrolytes in methanol and ethanol. S. Minc and J. Jastrzebska (Univ. Warsaw). *J. Electrochem. Soc.* 107, 135-9 (1960).—Differential capacities of the elec. double layer for LiCl, NaCl, NaCl, MgCl₂, and SrCl₂ in MeOH were measured. The capacities were higher in the presence of large cations (of low polarizability), which undergo chemisorption according to Frumkin's theory than in the presence of cations of high polarizability. In addn., the effect of concn. of the electrolyte on the differential capacity increased with decreasing polarizability of the cation. The solvent effect on the differential capacity was greatest near the zero charge potential; the decrease of the differential capacity relative to its value in aq. solns. was proportional to the decrease in dielec. const.

H. H. Jaffe

MINC, S.

S/081/62/000/023/015/120
B156/B186

AUTHORS: Mints, S., Rafal'ski, V.

TITLE: Kinetics of the process at the cathode when thorium is being separated out of molten salts. Part I. Investigation of ThF_4 and $\text{ThF}_4\text{-CaF}_2$

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 109, abstract 23B806 (Rept. Inst. badań jądrow. PAN, no. 267, 1961 17pp., illust. [summaries in Pol. and Russ.])

TEXT: Voltage-current and voltage-time curves were plotted from recordings made in molten ThF_4 (I), and in a molten mixture of 45 mol% I + 55 mol% CaF_2 , at 1100 - 1120°C. The anode was the graphite crucible, the cathode a rod of Mo. Three reduction potentials were found for the molten I: the first ($V_1 = 1.91$ v) corresponds to the reduction of ThO_2 oxygen compounds, the second ($V_2 = 2.5$ v) to the conversion of I into ThF_2 , and the third ($V_3 = 2.95$ v) is the potential at which Th separates out from I. In the

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Kinetics of the process at...

S/081/62/000/023/015/120
B156/B186

case of the molten I-CaF₂ mixtures, there is an additional potential for the dissociation of CaF₂, equal to 3.9 v. When currents were passed through the molten substances, n-type conductivity was observed. [Abstracter's note: Complete translation.] ✓

Card 2/2

23893
P/046/61/006/001/002/005
D221/D301

5.4500(B)

11.1190

AUTHORS: Weźranowski, Eugeniusz and Minc, Stefan

TITLE: The formation of H_2O_2 in de-aerated aqueous solutions under the influence of γ radiation

PERIODICAL: Nukleonika, v. 6, no. 1, 1961, 33-47

TEXT: The formation of H_2O_2 under the influence of ^{60}Co radiation and the effects of concentration and hydration energies of various cations on the average yield of this process are described. A PO3 type polarograph (Radiometer Co.) equipped with an automatic recording device, a saturated calomel anode and a dropping mercury cathode was used and a new method of estimating 10^{-4} - 10^{-6} M H_2O_2 in aqueous H_2SO_4 or Na_2SO_4 was devised. Oxygen was removed by passing pure N_2 through the solutions. After deoxygenating, polarograms of the aq. H_2SO_4 were made at 3 different sensitivities, H_2O_2 (0.05 ml, 10^{-5} M) was added, the mixture was de-aerated and its polarogram was taken at maximum sensitivity. The same procedure and supporting solution were used in determining other concentrations. Values of the dif-

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P/046/61/006/001/002/005
D221/D301The formation of H_2O_2 ...

fusion current corresponding to various concentrations of H_2O_2 were read off from the differences between the diffusion currents of the supporting solution and the H_2O_2 solutions, obtaining a linear relationship within $\pm 8\%$. The same polarograph and cell were used during both irradiation and analysis of the solutions, keeping the temperature at $25 \pm 0.1^\circ C$. Formation of H_2O_2 was studied in various concentrations of H, Li, Na, K, Cs and Mg sulphates. Polarograms of the solutions were taken (a) before irradiation at 0 - 1.2 V, and (b) during irradiation at a constant potential corresponding to the plateau of H_2O_2 current in the given medium. After irradiation, polarograms were taken at changing voltage. In this way, values of the yield, rate of formation of H_2O_2 and variations in the concentration of Hg ions were obtained. The influence of Hg^{2+} concentration in 0.2 M H_2SO_4 on the yield of H_2O_2 was studied, finding that concentrations $> (0 - 0.6) \times 10^{-4}$ M increased the initial yield, owing to a reaction between H^\bullet and Hg^{2+} and the consequent combination of OH^\bullet radicals. Formation of H_2O_2 in aq. H_2SO_4 and the sulphate solutions and the influence of hydration energies of the var-

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P/046/61/006/001/002/005
D226/D301

The formation of H_2O_2 ...

ious cations on radiation yield were studied with a concentration of Hg^{2+} (0.1×10^{-4} M) and radiation dose (4×10^{18} eV/ml). Formation of H_2O_2 in de-aerated 0.2 M H_2SO_4 (Fig. 10) showed that the number of H_2O_2 molecules formed (N) after absorption of a radiation dose (D) is given by $N = 4.03 D^{0.836}$ (4). The rate of formation of H_2O_2 will thus decrease with increasing D, and equilibrium will be established at a certain dosage (for which $\frac{dN}{dD} = 0$). The average yield was calculated at 0.350. The formation of H_2O_2 in sulphate solutions is illustrated. At the beginning, the expected linear growth of H_2O_2 with increasing doses of radiation is shown to be disturbed by another factor. Middle sections of the curves are generally straight, the formation of H_2O_2 being proportional to the dose absorbed, until equilibrium concentrations of H_2O_2 are approached. Average yields of H_2O_2 per 100 eV (G) in different solutions are plotted and it is shown that the characteristic shapes of the curves are unaffected by a viscosity correction, although the G values are slightly changed. The average yields were in all cases found to be greater than in pure water. The authors express their gratitude to Doctor Z. P. Zagorski and Mr. R. Broszkiewicz for helpful discussions and to

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The formation of H_2O_2 ...

23893

P/046/61/006/001/002/005
D226/D301

Mrs. D. Korytkowska for her assistance with the experimental work. There are 17 figures, 2 tables and 25 references: 11 Soviet-bloc and 14 non-Soviet-bloc. The references to the English-language publications read as follows: H.A. Mahlman and G.K. Schweitzer, J. Inorg. Nucl. Chem. 5, 213 (1958); D.L. Love, Anal. Chim. Acta. 18, 72 (1958); M. Brezina and P. Zuman, Polarography in Medicine, Biochemistry and Pharmacy, New York 1958, Interscience Publishers; S. Sendler and Yu-Ho Chung, Anal. Chem. 30, No. 7, 1252 (1958).

ASSOCIATION: Institute of Nuclear Research, PAS, Warsaw, Department of Radiation Chemistry.

SUBMITTED: November, 1960

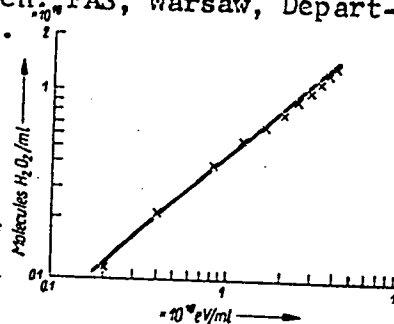


Fig. 10. The relation between the growth number of H_2O_2 molecules formed and the dose absorbed for 0.20 M H_2SO_4 .

Card 4/4

DEPTULA, Czeslaw; MINC, Stefan

Extraction of inorganic compounds by mixed extractants. Pt. 1. Studies on the systems: uranium and chromium - sulfuric acid - tri-N-octylamine - alkylphosphoric acids - diluent. Nukleonika 6 no. 3:197-209 '61.

1. Polish Academy of Sciences, Institute of Nuclear Research, Warszawa and Department of Electrochemistry, Warsaw University.

URBANSKI, Tadeusz S.; MINC, Stefan

Solvent extraction of cations with alkyl phosphoric acids from sulfate solutions. I. Solvent extraction of U^{VI} and P^{III} with dodecyl phosphoric acid in the presence of different cations. Nukleonika 6 no.12:765-773 '61.

1. Institut yadernykh issledovaniy PAN, Varshava, Laboratoriya khimicheskoy tekhnologii. Varshavsky universitet, Kafedra fizicheskoy khimii.

SOBKOWSKI, Jerzy; MING, Stefan

The apparent molal volume of HCl in nonaqueous solutions. *Rocz chemii*
35 no.4:1127-1130 '61.

1. Department of Electrochemistry, University, Warsaw.

RAFAL'SKI, Vadim; [Rafalski, W.]; ~~MINTS, Stan~~ [Minc, S.]

The mechanism of cathode process in the preparation of thorium-zinc alloys in fused salts. I. The systems ThF_4 and $\text{ThF}_4\text{-CaF}_2$.
Nukleonika 7 no.1:13-23 '62.

1. Polskaya Akademya Nauk, Institut yadernykh issledovaniy,
Varshava

RAFALSKI, Wadim; MINC, Stefan

Mechanism of the cathode process in the preparation of thorium-zinc alloys in fused salt. II. Research on ZnF_2 . Nukleonika 7 no.2:95-100 '62.

1. Institute of Nuclear Research, Polish Academy of Sciences, Warsaw.

RAFALSKI, Vadim (Rafalski, Wadim); ~~MINTE, Stefan~~ (Minc, Stefan)

Mechanism of the cathode process in obtaining thorium-zinc alloys
in fused salts. III. Electronic conductance in fused salts.
Nukleonika 7 no.3:161-168 '62.

1. Institut yadernikh issledovaniy, PAN, Varshava.

BROSZKIEWICZ, Roman; MINC, Stefan

The radiation induced oxidation and reduction reactions of iron in aqueous solutions. II. Nukleonika 7 no.7/8:483-486 '62.

1. Polish Academy of Sciences, Institute of Nuclear Research, Department of Radiation Chemistry, Warsaw.

URBANSKI, Tadeush S.[Urbanski, Tadeusz S.]; MINTS, Stefan [Minc, Stefan]

Extraction of cations with alkyl phosphoric acids from sulfate solutions. Pt. 2. Nukleonika 7 no.11:703-713 '62.

1. Institut yadernykh issledovaniy PAN, Varshava, Laboratoriya khimicheskoy tekhnologii Varshavskiy Universitet Kafedra fizicheskoy khimii, Varshava.

RAFAL'SKI, Vadim [Rafalski, Wadim]; MINTS, Stefan [Mino, Stefan]

~~Mechanism of the cathode process in preparing thorium-zinc alloys~~
in fused salts. Pt. 4. Nukleonika 8 no.1:41-55 '63.

1. Institut yadernikh issledovaniy, Varshava 9.

MINC, Stefan, prof. dr

Spectroscopic research on the structure of electrolyte solutions.
Problemy 19 no.5:315-316 '63.

1. Kierownik Katedry Chemii Fizycznej, Uniwersytet, Warszawa.

MINC, Stefan; SZYMANSKI, Andrzej

~~Reactions of OH and H radicals in aqueous sulfuric acid.~~

Reactions of OH and H radicals in aqueous sulfuric acid.
Rocz chemii 36 no.10:1543-1544 '62.

1. Department of Physical Chemistry, University, Warsaw.

MINC, Stefan; JASTRZEBSKA, Jadwiga

Influence of the solvents on the differential capacity of the electric double layer. Pt.1. Roczniki chemii 36 no.12:1901-1907 '63.

1. Department of Physical Chemistry, University, Warsaw.

MINC, Stefan; BRZOSTOWSKA, Maria

Influence of the solvent on the differential capacity of
the electric double layer. Pt.2. Roczniki chemii 36 no.12:
1909-1914 '63.

1. Department of Physical Chemistry, University, Warsaw.

MINC, Stefan; JASTRZEBSKA, Jadwiga

Differential capacity of mercury solutions of electrolytes in the presence of OH^- , I^- , and CO_3^{2-} ions at 0°C in water. *Rocz chemii* 37 no.4:507-509 '63.

1. Department of Physical Chemistry, University, Warsaw.

L 15234-65 EWG(j)/EWT(m)/EWP(j)/T/EWA(h)/EWA(1) Pc-4/Feb DIAAP RM

P/0046/64/009/07-/0611/0623

ACCESSION NR: AP4045668

AUTHOR: Minc, S. (Mints, S.); Zagorski, Z. P. (Zagurski, Z. P.);
Broszkiewicz, R. (Broshkevich, R.)

TITLE: Continuous methods of tracing chemical changes in fluids under gamma irradiation

SOURCE: Nukleonika, v. 9, no. 7-8, 1964, 611-623

TOPIC TAGS: fluid chemical change, gamma irradiation, trace method, spectrophotometry, polarography

ABSTRACT: Investigations were conducted to develop continuous methods of tracing chemical changes in the gamma radiolysis of solutions, since conventional methods of identification after irradiation have not led to a sufficient understanding of the chemical processes caused by gamma irradiation. Two methods were adopted for use in intense fields of gamma radiation (on the order of 100 rad/sec), spectrophotometry and polarography. All factors influencing the measure-

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L 15234-65

ACCESSION NR: AP4045668

ments were investigated. As a result of the measurements, kinetic curves were obtained showing the changes in the concentration of particular reagents in the system as a function of the time of irradiation and the time elapsed after it. The high sensitivity of the measurements made it possible to determine the kinetics of medium-stable intermediate products of radiolysis, e.g., in the case of water, hydrogen peroxide which occurs as an intermediate in oxidation reactions initiated by radiation. The techniques developed for continuous analysis during irradiation were used in investigations of several systems, with primary attention being devoted to the redox system of iron (II/III). It was determined that the change in the oxidation state of iron under irradiation proceeds at the expense of organic compounds and oxygen present in the solution. Orig. art. has: 10 figures and 2 tables.

ASSOCIATION: Institute of Nuclear Research, Warsaw

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NO REF SOV: 000

OTHER: 025

Card 2/2

MINC, Stefan; SZYMANSKI, Andrzej

Application of electric discharge to the initiation of chemical processes. Pts. 1-2. Roczniki chemii 37 no. 11:1525-1537 '63.

1. Department of Physical Chemistry, University, Warsaw.

MINC, S.; ZAGORSKI, Z.P.; BROSZKIEWICZ, R.

Continuous methods of tracing chemical changes in fluids under gamma irradiation. Nukleonika 9 no.7/8:611-623 '64

1. Institute of Nuclear Research, Warszawa-Swierk.

L 43570-65 EPF(c)/EPF(n)-2/EPR/ENG(j)/EWT(m)/EWP(b)/EWP(t) Pr-4/Ps-4/Pu-4
IJP(c) GG/JD

ACCESSION NR: AP5012921

PO/0046/64/009.010/0795/0800

33
31

AUTHOR: Minc, Stefan (Minta, S.); Wazranowski, Eugeniusz (Vez'ranovski, E.)

β

TITLE: Polarization ability of cations and formation of hydrogen peroxide in aerated aqueous solutions of sulphates exposed to Co-60 gamma radiation. I. Temperature dependence of the process for 0.50 Mol solutions of Li+, Na+, K+, Rb+ and Cs+

SOURCE: Nukleonika, v. 9, no. 10, 1964, 795-800

TOPIC TAGS: sulfate, gamma irradiation, hydrogen peroxide, ion, aqueous solution, hydrolysis

ABSTRACT: The article continues on the subject treated in an earlier one (Nukleonika 6, 33, 1961) by the same authors. It deals with the effect of temperature on the radiation yield of molecular products of water hydrolysis. The influence of the solution structure is also considered. In particular, the formation of hydrogen peroxide through exposing 0.5 M aqueous oxygen with solutions of sulphates to gamma

radiation from cobalt-60 was studied and the relative yield of H_2O_2

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L 43570-65

ACCESSION NR: AP5012921

2
under various conditions was ascertained. The experiment is described in which H_2O_2 is analyzed by chemiluminescence, the preparation of reagents, the method of irradiation, the dosimetry and the final results. These were obtained for the entire

These were obtained for the entire series of cations of the alkali elements and their relative performance is analyzed. "Many thanks are due to Mrs. B. Gawarska for technical assistance in the experiments." Orig. art. has: 1 diagram, 2 graphs.

ASSOCIATION: Department of Radiation Chemistry, Institute of Nuclear Research,
Warsaw

SUBMITTED: 22Feb64

ENCL: 00

SUB CODE: GC, NP

NO REF SOV: C70

OTHER: 004

JPRS

Card 2/2 m/b

MINC, Stefan; KOCZOROWSKI, Zbigniew; DABKOWSKI, Jan

Electrochemical measuring transducers of mechanical magnitudes.
Pomiary 10 no.8:334-337 J1'64

1. Department of Physical Chemistry, University, Warsaw.

L 45049-65 EPF(c)/EPF(n)-2/EWT(n) Pr-4/Pu-4 GG

ACCESSION NR: AP5014456

PO/0046/64/009/11-/0857/0862

25
24
3

AUTHOR: Minc. Stefan (Mints, S.); Wezrański. Eugeniusz (Vez'ranovski, E.)

TITLE: Polarization ability of cations and formation of hydrogen peroxide in aerated aqueous solutions of sulphates exposed to Co-60 gamma radiation // II. Temperature- and concentration-dependence of the process for Li+, Na+, K+, Rb+ and Cs+ solutions

SOURCE: Nukleonika, v. 9, no. 11-12, 1964, 857-862

TOPIC TAGS: radiation chemistry, sulfate, alkali metal, hydrogen peroxide, aqueous solution, temperature characteristic, solution concentration

Abstract: The article presents the results of further investigating 0.2 M, 0.9 M and 1.5 M aqueous solutions of sulphates of the alkali metals and the influence of temperature on the process of H_2O_2 formation due to radiolysis. The experimental procedure was described in the preceding paper (Nukleonika 9, p.795, 1964). The results of measurements are shown here in tabulated and graphical form. It appears that the amount of G (H_2O_2) is highest for water and decreases in solutions in the order from the heaviest cation (Cs+) toward

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L 45049-65

ACCESSION NR: AP5014456

the lightest cation (Li^+). The H_2O_2 yield also decreases with increase in cation concentration but increases with increasing temperature until equilibrium is reached between 60°C and 80°C . The influence of the structure of the solution, confirming the hypothesis, is explained in terms of dynamic changes in activation energy affecting the translatory movement of free water molecules, and the viscosity.

ing the translatory movement of free water molecules, and the viscosity. /
Orig. art. has 6 graphs and 3 tables.

ASSOCIATION: Department of Radiation Chemistry, Institute of Nuclear Research,
Warsaw

SUBMITTED: 10Mar64

ENCL: 00

SUB CODE: GC, NP

NO REF SOV: 001

OTHER: 002

JPRS

Card 2/2 m/b

L 50184-65

ACCESSION NR: AP5016336

PO/0046/65/010/002/0089/0094

14
B

AUTHOR: Stachowicz, Wacław (Stakhovich, V.); Kecki, Zbigniew (Kentaki, Z.); Minc, Stefan (Mints, S.)

TITLE: Effect of protection in gamma radiolysis of deaerated NEDA, NETA and naphthalene mixtures

SOURCE: Nukleonika, v. 10, no. 2, 1965, 89-94

TOPIC TAGS: gamma ray, radiation chemistry, hydrocarbon

ABSTRACT: Variations of the $G(H_2)$ values with the composition of deaerated two and three component mixtures of NEDA, NETA, and Naphthalene were determined. In all cases the deviation from the mixture-law considered here as energy transfer process,

technical assistance. Orig. art. has 5 graphs.

ASSOCIATION: Institute of Nuclear Research, Warsaw.

SUBMITTED: 18Jun64

ENCL: 00

SUB CODE: OC, NP

NO REF SOV: 000

OTHER: 022

NA

ml
Card 1/1

I 9745-66 EPF(n)-2/EWP(j)/EWA(h)/EWA(1) GG/RM
ACC NR: AP6001421

SOURCE CODE: PO/0045/65/010/005/0321/0330

AUTHOR: Kinc, Stefan—Mints, S.; Kecki, Zbigniew—Kentski, Z.; Kosek, Stanislaw 47

ORG: Department of Radiation Chemistry, Institute of Nuclear Research, Warsaw 23

TITLE: EPR spectra of gamma irradiated single crystals of β -succinic acid 14

SOURCE: Nukleonika, v. 10, no. 5, 1965, 321-330

TOPIC TAGS: EPR spectrum, single crystal, radiation chemistry, crystal chemistry, carboxylic acid, gamma irradiation

ABSTRACT: Changes in EPR spectra of gamma-irradiated crystals of β -succinic acid were studied after prolonged warming and at various temperatures. It was found that (I) $\text{HOOC}-\dot{\text{C}}\text{H}-\text{CH}_2-\text{COOH}$ and (II) $\text{HOOC}-\text{CH}_2-\dot{\text{C}}\text{H}_2-\text{COO}^\cdot$, stable at room temperature, are secondary radicals. A mechanism of formation of secondary radicals from primary ones is proposed. Thanks are due to Mr. Kazimierz for fine technical assistance. Orig. art. has: 9 figures. [NA]

SUB CODE: 07, 18, 20 / SUBM DATE: none / OTH REF: 007 / SOV REF: 003

6C
Card 1/1

L 15593-66

ACC NR: AP6008232

SOURCE CODE: PO/0046/65/010/006/0343/0354

AUTHOR: Deptula, C.—Deptula, Ch.; Minc, S.—Mints, S.

B 18

ORG: Department of the Technology of Radioactive Isotopes and Tracer Compounds, Institute of Nuclear Research, Swierk (Zaklad Technologii Izotopow Promieniotworczych i Zwiaskow Znaczonych, Instytut Badan Jadrowych); Department of Radiation Chemistry, Institute of Nuclear Research, Warsaw (Zaklad Chemii Radiacyjnej, Instytut Badan Jadrowych)

TITLE: Uranium (VI) extraction from sulphuric acid solutions with dialkylphosphoric acids solutions in benzene or carbon tetrachloride

SOURCE: Nukleonika, v. 10, no. 6, 1965, 343-354

TOPIC TAGS: uranium, sulfuric acid, solvent extraction, uranium compound, benzene, carbon tetrachloride

ABSTRACT: The influence of the concentration of sulfuric acid, uranyl sulfate, and the extractant on the extraction of uranium (VI) with di-n-butyl- and di-2-ethylhexylphosphoric acid solutions in benzene or carbon tetrachloride was investigated. The composition of the extracted compounds was determined and formulas for these compounds are proposed. The authors thank Mrs. B. Gawlowiki for assistance in the carrying-out of the experimental part of this work. Orig. art. has: 7 figured, 6 formulas, and 3 tables. [NA]

38 SUB CODE: 07 / SUBM DATE: 00 / ORIG REF: 005 / OTH REF: 024 / SOV REF: 001
Card 1/1

L 15595-66

ACC NR: AP6008233

SOURCE CODE: PO/0046/65/010/006/0355/0360

AUTHOR: Deptula, Czeslaw--Deptula, Ch.; Minc, Stefan--Mints, S. B 9

ORG: Department of the Technology of Radioactive Isotopes and Tracer Compounds, Institute of Nuclear Research, Swierk (Zaklad Technologii Izotopow Promieniotworczych i Zwiazkow Znaczoonych Instytut Badan Jadrowych); Department of Radiation Chemistry, Institute of Nuclear Research, Warsaw (Zaklad Chemii Radiacyjnej, Instytut Badan Jadrowych)

TITLE: Extraction of sulphuric acid with tri-n-octylamine solutions in benzene or carbon tetrachloride

SOURCE: Nukleonika, v. 10, no. 6, 1965, 355-360

TOPIC TAGS: sulfuric acid, solvent extraction, benzene, carbon tetrachloride

ABSTRACT: The influence of the concentration of sulfuric acid and extractant on sulfuric acid extraction with tri-n-octylamine in benzene or carbon tetrachloride was investigated. The degree of hydration of tri-n-octylamine in the organic phase was determined. The authors thank Mrs. B. Gawlowski for assistance in the carrying-out of the experimental part of this work. Orig. art. has: 1 figure, 1 formula, and 4 tables. [NA]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 006

Card 1/1

L 15597-66 EWT(1)/EPF(n)-2/EWP(j)/EWA(h)/EWA(1) LJP(c) WW/CS/RM 55
 ACC NR: AP6008235 SOURCE CODE: PO/0046/65/010/006/0371/0374 B
 AUTHOR: Minc, Stefan--Mints, S.; Kecki, Zbigniew--Kentski, Z.; Kosek, Stanislaw--Kosek, St.
 ORG: Department of Radiation Chemistry, Institute of Nuclear Research, Warsaw
 TITLE: EPR spectra of gamma irradiated single crystals of sodium succinate 21, 44, 55 74, 55
 SOURCE: Nukleonika, v. 10, no. 6, 1965, 371-374 19
 TOPIC TAGS: single crystal, gamma irradiation, organic salt, EPR spectrum, hyperfine structure, chemical stability
 ABSTRACT: The changes in the EPR spectra of gamma-irradiated crystals of sodium succinate with rotation about chosen axes were studied and the hyperfine structure was interpreted. The radical $\text{NaO}_2\text{CCH}_2\text{CH}_2$ was stable at room temperature and the radical $\cdot\text{CO}_2(\text{Na})$ was not stable. This fact confirmed the supposition that the single line observed in beta-succinic acid proceeds from the radical $\text{HO}_2\text{CCH}_2\text{CH}_2\text{COO}\cdot$. The technical assistance of Mr. Kazimierz Mazur is kindly acknowledged. Orig. art. has: 3 figures. [NA]
 SUB CODE: 20, 07 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 004

38

Card 1/1

L 14631-66
ACC NR: AP6008155

SOURCE CODE: PO/0046/65/010/007/0421/0426

AUTHOR: Deptula, Czeslaw—Deptula, Ts.; Minc, Stefan—Mints, S. 14
B

ORG: Department of the Technology of Radioactive Isotopes and Tracer Compounds, Institute of Nuclear Research, Swierk (Zaklad Technologii Izotopow Promieniotworczych i Zwiaskow Znaczonych, Instytut Badan Jadrowych); Department of Radiological Chemistry, Institute of Nuclear Research, Warsaw (Zaklad Chemii Radiacyjnej, Instytut Badan Jadrowych)

TITLE: Synergic and antagonistic effects in the solvent extraction of inorganic compounds with mixtures of amine and alkylphosphoric acids. The system: tri-N-octylamine+alkylphosphosphoric acid+diluent-H sub 2 SO sub 4 +H sub 2 O

SOURCE: Nukleonika, v. 10, no. 7, 1965, 421-426

TOPIC TAGS: sulfuric acid, amine, ester, phosphoric acid, solvent extraction

ABSTRACT: The influence of the concentration of sulfuric acid on its extraction with mixtures of tri-n-octylamine and alkyl esters of phosphoric acids (HDBP, HD2EHFA, H2MBP, H2DDPA) was investigated. It was found that addition of alkyl

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L 14631-66
ACC NR: AP6008155

esters of phosphoric acids to the solutions of tri-n-octylamine causes antagonistic effects that result from reaction of the amine with the corresponding ester. The authors thank Mrs. B. Gawlowski for assistance in the carrying-out of the experimental part of this work. Orig. art. has; 2 figures, 2 formulas, and 4 tables.

NA

SUB CODE: 07 / / SUBM DATE: --Jul65 / ORIG REF: 001 / OTH REF: 006
SOV REF: 001

Card 2/2 *SC*

L 33007-66 EWP(t)/ETI LIP(c) ID SOURCE CODE: PO/0046/65/010/012/0741/0746
ACC NR: AP6024165

AUTHOR: Minc, Stefan--Mints, S.; Wezranowski, Eugeniusz--Vez'ranovski, E.

ORG: Department of Radiation Chemistry, Institute of Nuclear Research, Warsaw

TITLE: Polarization ability of cations and formation of hydrogen peroxide in deaerated aqueous solutions of sulfates exposed to sup 60 Co gamma radiation. Dependence on concentrations and temperature for solutions of Li sup plus, Na sup plus, and Rb sup plus

SOURCE: Nukleonika, v. 10, no. 12, 1965, 741-746

TOPIC TAGS: cation, gamma radiation, sulfate, hydrogen peroxide, ion concentration, hydration, temperature dependence, radiation chemistry, aqueous solution, organic amide

ABSTRACT: The effects of hydration energy of various cations in 0.20, 0.90 and .50M aqueous solutions of Li, Na, and Rb sulfates on the yield of hydrogen peroxide GH_2O_2 in spur were examined. The deaerated aqueous solutions of sulfates exposed to gamma radiation contained acrylamide as an acceptor of the radicals formed. A dependence of the yield of hydrogen peroxide GH_2O_2 on the nature of the cation, its concentration and the temperature of the solution was observed. It was found, that under given conditions GH_2O_2 decreases with the increase of the temperature of the solutions, of

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0915 1754

L 33007-66

ACC NR: AP6024165

increases with increase of cation concentration in the solution, and the hydration energy of the cations. The authors thank Mrs. B. Gawarska for assistance with the experiments. Orig. art. has: 5 figures. [Orig. art. in Eng.] [NA]

SUB CODE: 07, 20 / SUBM DATE: 17Sep65 / ORIG REF: 002 / OTH REF: 001

Cord

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L 33009-66 EWP(t)/ETI IJP(c) JD/WW/JQ

ACC NR: AP6024166

SOURCE CODE: PO/0046/65/010/012/0747/0752

AUTHOR: Minc, Stefan--Mints, S.; Sobkowski, Jerzy--Sobkovski, Ye.; Stok, Mirosława

ORG: Department of Physical Chemistry, Warsaw University, Warsaw

TITLE: Kinetics of the reaction of oxidation of U(IV) ions by Fe(III) ions in sulfuric acid solutions. 80
B

SOURCE: Nukleonika, v. 10, no. 12, 1965, 747-752

TOPIC TAGS: sulfuric acid, oxidation, uranium, iron, ion concentration, thermal effect, reaction rate, chemical kinetics

ABSTRACT: Measurements of the course of the reaction between U(IV) and Fe(III) ions were carried out. The reaction rate rose as the sulfate ion concentration was increased and hydrogen ion concentration decreased. The temperature effect was also investigated. Orig. art. has: 2 figures and 3 tables. [Orig. art. in Eng.] [NA]

SUB CODE: 07 / SUBM DATE: 06Oct65 / ORIG REF: 003 / OTH REF: 006

Card 1/1 *ala*

09/3 1756

MINCA, Jan, inz.

Fluorocarbons as electric insulation materials. El tech obzor
51 no.1:42-43 Ja '62.

RUMANIA / Chemical Technology. Pharmaceuticals.
Vitamins. Antibiotics.

H-17

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 78710.

Author : Mincef, G.

Inst : Not given.

Title : The Application of Tincture of Medicinal Plants,
Growing in Kraiova Oblast.

Orig Pub: Farmacia (Romin.) 1956, 4, No 3, 270-273.

Abstract: No abstract.

Card 1/1

Minceef, Gh.
6 eqs

RUMANIA

MINDRECI, Viorica

Pharmacist

Member of staff of Pharmacy No 7, Craiova, Oltenia Regiune

Bucharest, Farmacia, Revista a Uniunii Societatilor de Stiinta
Medicale din Republica Populara Romina. No 9, Vol X, Sep 62,
pp 513-524.

"New Viewpoints for the Preparation of Collyriums." (Paper presented
to the Interregional Symposium in Pitesti on 15 June 1962.)

Co-authors:

COPOLOVICI, S. Pharmacist, Member of staff of Pharmacy No 7,
Craiova, Oltenia Regiune.

MINCEEF, Gh. Pharmacist, Member of staff of Pharmacy No 7, Craiova,
Oltenia Regiune.

1 of 2

USSR/Microbiology. General Microbiology

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57448

Author : Shefler S. , Mincer L., Benesh S.

Inst : Not given

Title : Experiments for Obtaining Attenuated and Immuno-
genic Strains of Enterobacteria

Orig Pub : Zh. mikrobiol., epidimiol. i immunologii, 1957,
No 8, 8-14

Abstract : Experiments were conducted for the attenuation
of Salmonella typhimurium, Salmonella enteridis
gartneri, Salmonella paratyphi B., Salmonella
typhi, and Salmonella ballerup with the help of
the following substances: surface-acting--bile
salts, lecithin, butanol; anesthetics--urethan,
novocaine; modifiers of the dielectical proper-
ties of the medium--glococoll, ethylene glycol,

Card 1/2

BYCZKOWSKI, Stanislaw, dr dr med.; KOPCZYNSKI, Witold; MINCER, Tadeusz;
SZCZUK, Witold; ZEGARSKI, Witold.

Degree of risk of being poisoned by lead for painter maintenance men employed in the ship industry. Bud okretowe
Warszawa 9 no.5:155-156 My '64

1. School of Medicine, Gdansk, and Voivodeship Station for Sanitation and Epidemiology, Gdansk.

MINCEV, D. [Minchev, D.]; ESKENAZI, G. [Eshkenazi, G.]

Germanium in jet coal of the Plevan region. Doklady BAN 16
no.5:537-540 '63.

1. Vorgelegt von J. Kostov [Kostov, I.], korresp. Akademienmitglied.

MINCEV, Dimitar [Minchev, Dimitar]

Bases of the petrogenesis in coal formation. *Geichiklye biol* 57 no.1:
259-265 '62-'63[publ.'64].

MINCEV, Kiril

Purpura rheumatica in a patient with pulmonary tuberculosis.
Tuberkuloza, Beogr. 11 no. 4: 541-547 O-D '59.

1. Institut za tuberkulozu NR Makedonije, Skopje, direktor:
prof. dr G. Muratovski.

(TUBERCULOSIS PULMONARY compl.)

(PURPURA compl.)

MINCEV, Nikola

Yugoslav economy in 1963. Medun transp 9 no.1:5-7 Ja '63.

1. Clan Saveznog izvrasnog veka i generalni direktor Saveznog
zavoda za plan.

RACEV, L.; MINCEV, P.

Fetop: thies. Savv. med. (Sofits) 16 no. 1:47-56 '65.

B-5

3DR / Physical Chemistry--Crystals.

Abs Jour : Referat Zhur--Khimiya, No. 11, 1959, 37702

Author : Minceva-Stefanova, J.

Inst : Not given

Title : On the Crystallochemical Relationship Between Pyrite and Cobaltite.

Orig Pub : Chem Erde, 19, No. 4, 386-391 (1958) (in German)

Abstract : The author has made an optical and x-ray (powder method) study of the orientation and the regular substitution of pyrite (I) in cobaltite (II) in crystals from the Vanya deposit (Bulgaria). In comparing the structures of I and II the author has made use of the work of Onorato (RZhKhim, 1959, 3670) on the structure of II according to whom the latter belongs to the C_{2h}^5 space group.
-- L. Tsinober

Card 1/1

11

NICOLAU, GH. ST., academician.; TEODORSCU, ST.; BLUMENTAL, M.; MAISLER,
Al.; COMU, A.; HINCH, Al.; VULCAN, F.; FELLNER, M.;
DUMITRESCU, Al.; IVAN, M.

Studies of the role of streptococci in skin pathology. Bul. stiint.,
sect. Med. 7 no. 2:513-555 Apr-June 55

(SKIN, diseases
streptoc. infect., bacteriol. & ther.)
(STREPTOCOCCAL INFECTIONS
skin, bacteriol. & ther.)
(ANTIBIOTICS, ther. use
streptoc. infect. of skin)

MINCH, A. A.

Ionization of the air as a hygienic factor. J. hyg. epidem., Praha 5
no.4:479-491 '61.

1. Chair of Hygiene, Stomatological Medical Institute of U.S.S.R.,
Moscow.

(AIR) (IONS)

SHTAREV, V.V., red.; MINCHAK, Ya.N., red.; YERSHOV, P.R., vedushchiy
red.; FEDOTOVA, I.G., tekhn.red.

[Tackle in transportation] Transportno-takelazhnye raboty.
Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi
lit-ry, 1959. 82 p. (MIRA 13:1)

1. Moscow. Nauchno-issledovatel'skiy institut truda. Tsentral'-
noye byuro promyshlennykh normativov po trudu.
(Oil fields--Equipment and supplies)

MINCHAKOV, K. V.

WHEAT

Change in the nature of plants. Sel, 1 sem. 19 No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952. UNCLASSIFIED

MINCHAYEV, Kh. N.

USSR/Chemistry - Liquid Fuels, Aromatization Jul/Aug 52

"Poisoning Under Conditions of Dehydrogenation: Catalysis of Platinum Catalysts Having a Low Content of Active Metal on the Carrier," Kh. N. Minchayev, N. I. Shuykin, I. D. Rozhdestvenskaya, Inst of Org Chem, Acad Sci USSR

"Is Ak Nauk SSSR, Otdel Khim Nauk" No 4, pp 603-615

Found in the dehydrogenation of cyclohexane that the deg of poisoning of the catalysts investigated does not depend on the compn of the sulfur compds

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which are responsible for poisoning: they all act in the same manner and their effect corresponds to that of an equiv amt of H_2S . The amt of organically combined sulfur which produces poisoning of the catalyst is proportional to the amt of platinum contained in the catalyst. Catalysts deposited on different carriers and poisoned by the same agent are regenerated in a different manner.

229M3

MINCHAYEV Kh. M.

~~MINCHAYEV, Kh. M.~~

USSR/Chemistry

Card 1/1

Authors : Shuykin, N. I., Member-Correspondent of the Acad. of Scs. of the USSR, Minchev, Kh. M; Tulupova, E. D., and Egorov, Yu. P.

Title : Transformations of ethylcyclopentane in the presence of Ru- and Pd-catalysts under the pressure of hydrogen in a flowing system.

Periodical : Dokl AN SSSR 95, 6, 1211 - 1214, 21 Apr 1954

Abstract : The article gives the specific characteristics of metallic catalysts in relation to their chemical properties and the special features of carrying agents, especially, under the pressure of hydrogen in flowing systems. Tables, a diagram.

Institution : N. D. Zelinskiy's Institute of Organic Chem. of the Acad. of Scs. of the USSR

Submitted : 17 Feb 1954

MINCHEJMER, A.

Minchejmer A. Design and Operating Principles of Worm Steering Gear with Roller in Automobiles.

"Zasady budowy i działanie samochodowej przekładni kierowniczej ze ślimakiem globoidalnym z krążkiem". (Prace Gl. Inst. Mechan. No. 2). Warszawa, 1930, Gl. Inst. Mechan., 18.5 pp., 18 figs., 8 tabs.

Design of worm steering gear provided with a grooved roller. Basic conceptions of the construction and operating principles of the worm steering gear with the grooved roller. Conditions of cooperation of the roller with the worm gear. Effect of faulty mounting on the theoretical cooperation of the roller with the worm gear. Analysis of the position of the tooth flanges of the roller in relation to the worm thread. Factors affecting the diminution of backlash between the roller and the worm teeth. Graphical and analytical method of examining the functional relation between the tooth flanges of the shaft and the worm thread. Guiding principles for selecting the contour of worm thread and type of shaft.

JH

MINCHEIMER, A.

POL.

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625.7/.001.2

Mincheimer A. General Road Test Principles.

"Ogólne zasady przeprowadzania badań drogowych". Technika Motoryzacyjna. No. 8, 1953, pp. 161-163.

Current road test principles. Role and responsibilities of road tests; admitting vehicles for road test; technical service and overhaul of vehicles tested; review of road test planning; documentation relating to test routine and to results obtained; measuring and control instruments; test roads and test road sectors. The author emphasizes the importance of road tests as a means of determining the traffic and operation qualities of power-driven vehicles.

MINCHEJMER, A.

(MOTORYZACJA, Vol. 8, No. 12, Dec. 1953, Warszawa, Poland)

"Book reviews." p. 347

SO:

MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, L.C., Vol. 3, No. 4, APRIL 1954

MINCHEJMER, A.

Studies of loads and working conditions of automobiles and their mechanisms.
p. 34. (TECHNIKA MOTORYZACYJNA, Vol. 4, No. 2, Feb. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 3, No. 12, Dec.
1954, Uncl.

MINCHEJMER, A.

Special training of automobile engineers in the field of automobile and tractor research and construction. p. 67. (TECHNIKA MOTORYZACYJNA, Vol. 4, No. 3, Mar. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

MINCHEJMER, A.

Standards of the motor industry used in testing automobiles and motors. p.65.
(TECHNIKA MOTORYZACYJNA, Warszawa, Vol. 5, No. 3, Mar. 1955)

SC: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955, Uncl.

84-58-4-33/48

AUTHOR: Minchenko, A., Mi-1 Helicopter Pilot (Krasnodar)

TITLE: Widen the Use of Helicopters on Local Routes (Shire primenyat' vertolety na mestnykh avialiniyakh)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 4, p 34 (USSR)

ABSTRACT: In this letter to the editor, the author complains that the helicopters of the operational unit under Sytyy, of the North Caucasian Territorial Administration of the GVF, are idle while there are suitable tasks for them. The management's excuse is that helicopters are expensive to operate, so that flights even to mountainous places have been dropped from planning for the current year.

1. Civil aviation--USSR 2. Helicopters--Performance

Card 1/1

MINCHENKO, A.; GENIN, N., yuriskonsul't (g.Minsk)

A new charter for a producers' cooperative in White Russia. Prom.
koop. 14 no.8:6 Ag '60. (MIRA 13:8)

1. Nachal'nik otdela orgraboty i kadrov Belpromsoвета, g.Minsk
(for Minchenko).

(Minsk--Cooperative societies)

ROSHDESTVENSKIY, G.N.; MINCHENKO, B.G.; YERMOLOV, K.M.

Automatic frequency meter with digital reading. Izv. tekhn.
no.10:15-17 0 '65. (MIRA 18:12)

CHERNOBYL/SKIY, I. I. (Dr. Tech. Sci.), BALITSKIY, S. A. and MINCHENKO, F. P:

"Results of an Experimental Investigation of Heat Transfer during Boiling of Aqueous Solutions of Lithium Bromide and Chloride under Vacuum."

report presented at sci. and tech. session on Heat Exchange during Change of Aggregate State of Matter (by Comm. on High Steam Conditions, Power Inst, AS USSR, and Inst. Thermal Engineering, AS UkrSSR) Kiev, 23-28 Sep 57.

Inst. Thermal Engineering, Acad. Sci. Ukr SSR (for Chernobyl'skiy, and Balitskiy, Cent. Boiler Turbine Inst (for Minchenko)

87945

S/114/60/000/006/003/008
E194/E355

11.9400

AUTHOR: ~~Minchenko, F. P.~~ R. Engineer

TITLE: Concerning Heat Exchange During Bubblewise Boiling

PERIODICAL: Energomashinostroyeniye, 1960, No. 6,
pp. 17 - 21

TEXT: Most investigations of heat exchange on boiling refer to so-called pure liquids, of a single component. Increasing use, however, is now being made of aqueous solutions of lithium salts in power installations. The lack of heat transfer and thermal physical data for these solutions makes it necessary to carry out special investigations. This article describes part of the work, comprising the investigation of heat transfer during the boiling of water and aqueous solutions of lithium chloride and bromide, carried out at the TsKTI (Central Boiler Turbine Institute). Two types of test equipment were used, one a large-volume equipment and the other a circulation circuit. In the first of these, tests were made on a

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Concerning Heat Exchange During Bubblewise Boiling

horizontal tube of heat transfer as a function of thermal loading, pressure and solution concentration. In the circulating circuit, tests were mainly made on the influence of rate of flow of liquid and solution concentration. Preliminary tests were made with water under the same conditions, to compare the results. The experimental rig was of the electrically-heated type with the usual kinds of instrumentation and procedure; brief details are given.

The conditions and ranges of the main parameters tested are given in Table 1. The test results in the large volume for water are shown in Fig. 1 and it will be seen from the graphs that there is good agreement between the main and control tests at atmospheric pressure. Hence, the conditions on the surface were stable in all the tests and can be compared with one another. The results are also in good agreement with similar investigations by many authors.

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Concerning Heat Exchange During Bubblewise Boiling

The experimental points for the main experiments with water are clearly separated according to the pressure, and in logarithmic coordinates give a number of parallel lines which satisfy an expression of the type

$$\alpha = Af(p)q^{(n)}, \text{kcal/m}^2\text{h } ^\circ\text{C} \quad (3) .$$

The results of some of the tests with solution in the large volume are plotted in Fig. 2 for two concentrations of lithium chloride, 10 and 50%. Similar curves were obtained for lithium bromide but are not given. For both salts Table 2 gives mean values of heat-transfer coefficient as function of pressure, concentration and thermal loading:

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Concerning Heat Exchange During Bubblewise Boiling

$q \cdot 10^{-3}$ kcal/m ² h	p = 1.03 atm.			p = 0.50 atm.			p = 0.14 atm.		
	10%	25%	50%	10%	25%	50%	10%	25%	50%
LiCl solutions									
50	3900	3800	2800	4700	4200	3100	5800	5000	4100
100	6900	6700	4700	8000	7300	5300	10000	8700	6800
250	14400	13600	9300	16500	14500	10500	21000	17800	13400
LiBr solutions									
50	4300	4000	3300	5100	4500	3800	6000	5200	4600
100	7500	7000	5300	8900	7700	6000	10400	900	7300
250	14400	14000	9800	18000	15600	11000	21000	18000	13400 .

The test results show that with increase in pressure and concentration the intensity of heat transfer in solutions drops. Under equal conditions the absolute values of the

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Concerning Heat Exchange During Bubblewise Boiling

heat-transfer coefficient for both salts is similar but is always lower than for water. The heat-transfer rate is an exponential function of pressure in the region tested for both water and salts; the influence of concentration is also exponential.

Test results on water and solutions in the circuit, constructed in semilogarithmic coordinates, form a series of parallel lines, each corresponding to a certain speed and solution concentration. Analysis and comparison of the results with those of other investigators show that under conditions of forced convection the intensity of heat transfer depends on the ratios of speed and thermal loading. To each value of speed there corresponds a certain limiting value of heat transfer. Beyond it, speed has no further influence on the rate of heat transfer and the heat-transfer coefficient is wholly determined by the thermal loading, as in free convection.

Comparison of results for many liquids indicates that with developed free boiling the viscosity of the liquid has little

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Concerning Heat Exchange During Bubblewise Boiling

influence on the process of heat exchange and the typical thermal physical properties of the liquid as a heat-transfer agent apply in the superheated layers near the walls. On the basis of tests on water and solutions, an analysis was made of the proposed system of equations and criteria obtained from the equations of motion, from those of heat propagation and from the boundary conditions. The presence in the tests of three independent variables and the associated wide changes of physical constants made it possible to reveal the individual influence and inter-effect between criteria and to find a system of governing criteria reflecting the main characteristics of the process. It was established that the main relationships of the heat-transfer process during boiling are sufficiently fully described by an expression of the type of Equation (6) which in the particular form required may be written as expression (7). The graph plotted in Fig. 3 shows Eq. (6)

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Concerning Heat Exchange During Bubblewise Boiling

applied to the present results and those of other authors and despite the great differences in experimental conditions all the points lie close to a single straight line. Similar treatment of test results on salt solutions in the large volume are plotted in Fig. 5. All the test points for different concentrations and pressure satisfy the following equation:

$$\frac{\alpha}{\lambda} \sqrt{\frac{\sigma}{\gamma - \gamma''}} = 0.55 \left[\frac{q p 10^{-4}}{r \gamma'' (\gamma - \gamma'') \alpha} \right]^{0.7} \quad (7)$$

although not quite so well as for the tests on water. There is some tendency to form separate lines for different pressures, apparently because of the special features of heat transfer in solutions.

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Concerning Heat Exchange During Bubblewise Boiling

Fig. 6 shows a generalised curve for the tests with forced circulation in a tube. In addition to the present work other authors' results are included, covering the range up to 86 atm and speeds of up to 3 m/s. It will be seen that all the tests with developed boiling agree between themselves and with the common logarithmic line corresponding to Eq. (7). Acknowledgments are made to Engineers E.V. Firsova and V.N. Golovin for participation in the tests. There are 6 figures, 2 tables and 12 references: 7 Soviet and 5 non-Soviet.

Card 8/8

MINCHENKO, F. R.

"Generalization of Dependence for Heat Transfer at Boiling."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

26.5400

S/124/62/000/006/018/023
D234/D308

AUTHORS: Borishanskiy, V. M., Bobrovich, G. I. and Minchenko, F. P.

TITLE: Heat transfer during bubble boiling of water and ethyl alcohol on the outside surface of pipes (in large volumes)

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 6, 1962, 90-91, abstract 6B587 (V. sb. Voprosy teplootdachi i gidravliki dvukhfazn. sred, M.-L. Gosenergoizdat, 1961, 75-93)

TEXT: Experimental data are given on heat transfer during boiling in a wide interval of variation of heat flow (water up to 10^6 kcal/hr.m², ethyl alcohol up to 7×10^5 kcal/hr.m²) and pressure (from atmospheric to critical). The influence of boiling on heat transfer is found and it is established that this influence is expressed by a complicated relation and cannot be represented in the form of a simple power function with a constant exponent. Data ✓

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Heat transfer during ...

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D234/D308

processing has been carried out according to criterial formulas of various authors, and showed that these formulas are only reliable in the domain for which they have been obtained. 17 references.
/_Abstracter's note: Complete translation._/

Card 2/2

26.5400.

S/124/62/000/006/019/023
D234/D308

AUTHORS: Minchenko, F. P. and Firsova, E. V.

TITLE: Heat transfer to water and aqueous solutions of lithium salts during bubble boiling in large volumes

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 6, 1962, 91, abstract 6B589 (V sb. Vopr. teplootdachi i gidravliki dvukhfazn. sred, M.-L., Gosenergoizdat, 1961, 117-128)

TEXT: An investigation of the heat transfer during boiling of two-component liquid (LiCl and LiBr in water) in the range of heat flows up to 200,000 kcal/m².hour on a horizontal pipe. Pressure and concentration of salts varied. Visual observation was made simultaneously with the measurements. After data processing in critical parameters a design formula $N = 0.55 (K_p Pe)^{0.7}$ was obtained. ✓
Tables of data and graphs of dependences are given. 18 references.
/Abstracter's note: Complete translation./

Card 1/1

ACC NR: AP6036038

SOURCE CODE: UR/0057/68/036/011/2064/2061

AUTHOR: Auslender, V.L.; Minchenkov, G.B.

ORG: none

TITLE: Investigation of the desorption of gases from metal surfaces under the action of electron bombardment

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 11, 1966, 2064-2068

TOPIC TAGS: desorption, electron bombardment, metal surface, copper, stainless steel

ABSTRACT: The authors have investigated desorption of gas from copper and stainless steel surfaces under bombardment with 100 to 600 eV electrons. The investigations were conducted in 1963 and 1964. The specimens were in the form of 6 cm diameter closed cylinders with 0.5 cm wall thickness. A tungsten filament within the cylindrical specimen served both to heat the specimen and (apparently) as the source of bombarding electrons. The specimens were cooled by a flux of water or air through cooling tubes. The temperature could be held within 10° C of a selected value between 200 and 500° . The apparatus was continuously pumped at a rate of about 80 liter/sec, and the working pressure was from 10^{-8} to 4×10^{-8} torr. The pressure changes due to the desorbed gas were measured with an Alpert gage. The composition of the desorbed gas was determined with a flight time mass spectrometer. All three investigated metals behaved very much alike as regards desorption of gas under electron

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UDC: 541.183.03

ACC NR: AP6036038

bombardment. When the metals were not subjected to preliminary outgasing by heat and electron bombardment, the desorption rate was about 8×10^{-3} molecule/electron and was independent of the energy of the bombarding electrons. Preliminary outgasing reduced the desorption rate by an order of magnitude. When the sample was cooled to 196°C the desorption rate varied with the bombarding electron energy and was maximum for an electron energy of about 170 eV. The lowest desorption rates were observed with heated specimens. At a specimen temperature of 400°C the desorption rate was 8×10^{-6} molecule/electron. Most of the desorbed gas was hydrogen and carbon monoxide, and the relative amounts of these two components remained constant with time. The authors thank T.M.Zhdanova and Ye.D.Bender for their assistance with the measurements, and A.A.Naumov and G.A.Blinov for their interest and valuable advice. Orig. art. has: 2 formulas and 5 figures.

SUB CODE: 20

SUBM DATE: 24Aug65

OTR REF: 002

Card 2/2

MINCHENKO, I.

Improving insurance work. Fin.SSSR 18 no.7:51-54 J1 '57.
(MLRA 10:7)

1. Nachal'nik upravleniya Gosstrakha po Moldavskoy SSR.
(Moldavia--Insurance, Social)

MINCHENKO, I.

How we help logging inspections. Fin.SSSR 21 no.6:75-76
Je '60. (MIRA 13:6)

1. Nachal'nik upravleniya Gosstrakha Moldavskoy SSR.
(Moldavia--Insurance)

SOV/124-58-11-12019

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 12 (USSR)

AUTHOR: Minchenko, L. S.

TITLE: Euler's World of Physics (Fizika Eylera)

PERIODICAL: Tr. In-ta istorii yestestvozn. i tekhn. AN SSSR, 1957, Vol 19, pp 221-270

ABSTRACT: This paper endeavors to give a picture of Euler's basic achievements in physics. Examined in greatest detail are Euler's investigations and concepts in the field of physical optics. Particular attention is given to the content of Euler's "Nova theoria lucis et colorum", published in 1746, in which he elaborated his ether (aether) theory of light, which theory the present author analyzes. Mentioned also are some of the mathematical bases of wave optics, which Euler had included in the same work. On the basis, mainly, of "De la propagation du son", published by Euler in 1758, the author focuses his attention on Euler's derivation of the wave equation and his investigation thereof. The section on physical optics concludes with a discussion of Euler's research on the scattering of light and of the influence of his work in this field on subsequent experimental

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SOV/124-58-11-12019

Euler's World of Physics

attempts to construct achromatic systems. An account is given also of Euler's work on the theory of electricity and magnetism and, in somewhat more detail, on his research in connection with combustion and the theory of heat. Some of Euler's misconceptions with respect to the role of air in combustion are pointed up. The author's exposition of the problems in mechanics which he discusses is slipshod. His account of Euler's derivation of the wave equation (pp 239-240) is muddled and at variance therewith, and in his introduction he erroneously credits Euler with having evolved the equations of Lagrange of the first and second kinds. Bibliography: 52 references.

G. K. Mikhaylov

Card 2/2

MINCHENKO, L.S., Cand Phys-Math Sci--(diss) ^{the} "Physics of Leonard
Euler." Mos, 1958. 14 pp (Acad Sci USSR. Inst of the History of
Natural Science and ^{Technology} Engineering), 110 copies (KL, 22-58, 101)

- 6 -

MINCHENKO, I. S.

A dissertation by Leonard Euler on electricity. Trudy Inst.
ist. est. i tekhn. 28:188-200 '59. (MIRA 13:5)
(Euler, Leonard, 1707-1783) (Electricity)

MINCHENKO, L.S. (Tambov)

Unpublished comment by Euler on M.V.Lomonosov's work. Vop.1st.
est.1 tekhn. no.10:55-56 '60. (MIRA 14:3)
(Euler, Leonhard, 1707-1783)
(Lomonosov, Mikhail Vasil'evich, 1711-1765)

KUDRYAVTSEV, P.S., prof., otv. red.; FIGUROVSKIY, N.A., prof.,
red.; IVANENKO, D.D., prof., red.; SPASSKIY, B.I., dots.,
red.; YAKOVLEV, V.A., dots., red.; MINCHENKO, L.S., kand.
fiz.-mat. nauk, red.; BRAUDE, M.V., kand. filos. nauk, red.;
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